

XIII. *Notes on the Scoliidae.* By ROWLAND E. TURNER,
F.Z.S.

[Read June 1st, 1910.]

PLATE L.

THE new species which furnish the material for this paper are mostly in the collection of the Berlin Museum, though a few are from other sources. The material shows that the genus *Anthobosca* ranges all up the east of Africa into Arabia, and also adds a new genus to the small family Sapygidae, the type of the genus having been placed in the British Museum by the late Colonel Bingham. Ashmead has divided the *Scoliidae* into several families, which I retain as sub-families, but some of the genera he includes must be placed elsewhere.

Family SCOLIIDAE.

Sub-family MYZININAE.

Myzine nigrita, sp. nov. (Plate L, fig. 6.)

♂. Clypeus produced and rather broadly truncate at the apex, coarsely punctured. Head rugose, broader than the pronotum, the posterior ocelli more than half as far again from the eyes as from each other; the antennal tubercles large, the scape short, no longer than the second joint of the flagellum, antennae short, scarcely longer than the thorax and median segment combined, very stout, the second joint of the flagellum more than half as long again as the first, a little shorter than the third, joints 5-10 strongly arcuate beneath. Head and thorax clothed rather sparsely with long cinereous grey pubescence, the abdomen very sparsely clothed with short greyish-white pubescence. Thorax closely punctured, the pronotum much shorter than the mesonotum, the median segment rounded, not truncate. Abdomen closely and finely punctured, the petiole about equal in length to the third joint of the posterior tarsi, the first segment, excluding the petiole, a little longer than broad, not constricted at the apex, the whole abdomen of an elongate fusiform shape; seventh dorsal segment with a longitudinal depression on each side on the apical half, the apex narrowly and not deeply emarginate, the depth of the emargination scarcely as great as the width at the apex.

Aculeus moderately recurved, short, the apex only reaching the emargination of the dorsal segment. Second abscissa of the radius a little longer than the third, first recurrent nervure received just beyond the middle of the second cubital cell, second at one-fifth from the base of the third cubital cell.

Black; the calcaria whitish. Wings hyaline, nervures black. Length 15 mm.

Hab. CAPE COLONY.

Type in Berlin Museum.

The arcuate joints of the antennae, the short aculeus and the more flattened form of the first abdominal segment distinguish this species at once.

Myzine continua, Cam.

Plesia continua, Cam., Rec. Albany Mus., i, 5, p. 299, 1905.

I think Cameron has very much underestimated the variability in the males of this group, and that his *continua* and *interrupta* are probably the same species. I think they probably belong to *Myzine* rather than to *Plesia*, but Cameron does not mention the shape of the first abdominal segment. The deep slit in the apical dorsal segment of the abdomen which is mentioned in the description is always present in *Myzine*, but is often absent in *Plesia*. If it is considered impossible to distinguish between the males of the two genera, it seems there is no excuse for describing them in *Plesia*, the name *Myzine* having priority, and its use for the males being recommended by Saussure. Some of the males described by Cameron from Baluchistan as *Plesia* have proved beyond doubt to belong to *Myzine*. The descriptions of *continua* and of *interrupta* apply fairly well to a species which has a wide range in South Africa, and shows considerable variation both in colour and the smaller details of neuration. I think it probable that it is the male of *Myzine rufifrons*, Fabr.; the range of both extends from the Zambesi to Cape Colony. In the males of this genus, and in both sexes of *Tiphia*, there is a fine field for the species monger, which fortunately has not yet been exploited.

Myzine rufinodis, sp. nov. (Plate L, fig. 5.)

♂. Clypeus short and broad, the apical margin almost transverse, shallowly emarginate in the middle, strongly punctured at the base, almost smooth at the apex. Head, thorax, and median segment

closely and rather coarsely punctured, the middle of the scutellum narrowly smooth and shining. Antennae very stout, the first joint of the flagellum half as long as the second, the third distinctly longer than the second, the scape short and coarsely punctured; the front between the antennae densely clothed with long cinereous-grey pubescence, which is also sparsely distributed over the whole of the head and thorax. Pronotum much shorter than the mesonotum, very slightly narrowed anteriorly, the anterior margin almost transverse. Abdomen rather slender, shining, finely and shallowly punctured with a short petiole which is about equal in length to the fourth joint of the posterior tarsi, the first segment beyond the petiole swollen and globular, broader than long. Apical segment more sparsely punctured, the emargination for the aculeus rather shallow, broader at the apex than deep, the surface of the segment, before the emargination, not flattened or depressed. Aculeus long and slender, strongly recurved. Basal joint of the posterior tarsi about three-quarters of the length of the tibia. Second abscissa of the radius more than half as long again as the third, first recurrent nervure received at two-thirds from the base of the second cubital cell, second before one-sixth from the base of the third cubital cell.

Black; mandibles, anterior margin of the clypeus, margins of the pronotum, tegulae, a narrow transverse band at the apex of the first dorsal segment of the abdomen, a transverse spot on the middle of the apical margin of segments 2-6, with a smaller transverse spot on each side, and similar, but much smaller marks on ventral segments 2-5 pale yellow; first dorsal segment, except the petiole and the yellow apical band, ferruginous red; legs dull ferruginous. Length 15 mm.

Hab. CAPE COLONY (*Drège*).

Type in Berlin Museum.

I think that I am right in placing this species in *Myzine* rather than in *Plesia*, the males of the two genera are however not always to be distinguished with certainty. The group of South African species characterised by an elongate basal segment of the abdomen and the absence of an emargination of the apical dorsal segment are certainly males of *Plesia*. I suspect however that some species showing neither of these characters, but of a rather slender form, and with a long pronotum narrowed anteriorly, may also prove to have females of the *Plesia* type of neuration.

The present species is easily distinguished by the red colour of the first dorsal segment, but unless there is some marked point of distinction it is better to leave the males

of this group undescribed until larger collections of both sexes are available and local variations better understood.

Plesia (Mesa) saussurei, sp. nov.

♀. Clypeus very short, punctured, the apex depressed and smooth. Head coarsely punctured, more closely on the front than on the vertex; the scape shining and finely punctured; flagellum opaque, the three basal joints shining, the first joint short, almost concealed in the apex of the scape, the third longer and thicker than the second. Pronotum rather shorter than the mesonotum and scutellum combined, the sides almost parallel, coarsely punctured-reticulate; mesonotum and scutellum coarsely but more sparsely punctured, propleurae indistinctly striated, mesopleurae coarsely punctured, metapleurae striated. Median segment as long as the pronotum, deeply but irregularly punctured, nearly twice as broad as long, distinctly margined, with two low, median, longitudinal carinae, the posterior truncation steep, the surface finely rugulose. Abdomen stout, about equal in length to the head, thorax and median segment combined, rather closely punctured; petiolate, the petiole linear, equal in length to rather more than half of the dorsal surface of the first segment, which is nearly as long as the second; sixth dorsal segment longitudinally striated, broadly rounded at the apex. Tarsal ungues bifid. Second abscissa of the radius scarcely half as long as the third, and less than two-thirds of the length of the first, second recurrent nervure received beyond the middle of the third cubital cell, the third transverse cubital nervure oblique, the radial cell rounded at the apex, scarcely separated from the costa.

Black; the mandibles, clypeus, scape, three basal joints of the flagellum, tarsi and the apex of the pygidium fusco-ferruginous. Wings fuscous. Length 10 mm.

Hab. MADAGASCAR, Antananarivo. Two specimens.
Type in the Zoological Museum at Berlin.

Sub-family TIPHIINAE.

Tiphia conradti, sp. nov.

♀. Clypeus short, almost transverse at the apex. Front round the base of the antennae transversely depressed, slightly concave and very finely rugulose; the remainder of the head shining and sparsely punctured, smooth round the ocelli. Posterior ocelli very near together, nearly three times as far from the eyes as from each other. Scape closely punctured, with sparse greyish pubescence, the apex

smooth and shining. Pronotum sparsely punctured, the posterior margin broadly smooth and shining; mesonotum and scutellum shining, with a few very large punctures, propleuræ almost smooth, mesopleuræ rather sparsely punctured, the sides of the median segment finely obliquely striated. Median segment almost as long as the pronotum, mesonotum and scutellum combined, subopaque, almost smooth, with the three usual carinæ in the middle, the median one not reaching the apex, the two lateral ones half as far again from each other at the base as at the apex, the margins of the segment distinctly raised both at the apex and the sides, a fine longitudinal carina on each side narrowly separated from the raised lateral margin. Abdomen shining, finely punctured, the two basal segments sparsely, the others more finely and closely, the apical half of the pygidium smooth; the basal segment broad, without a transverse carina at the base. Stigma very small, almost absent; first recurrent nervure received at the middle of the first cubital cell, second at three-quarters from the base of the second cubital cell; second transverse cubital nervure strongly curved inwardly.

Black; mandibles, antennæ and anterior tibiæ beneath fusco-ferruginous, the apical half of the pygidium pale testaceous; spines of the tibiæ and tarsi pale ferruginous; the pubescence on the abdomen and legs whitish. Wings hyaline, tinged with fuscous, nervures black. Length 10 mm.

Hab. N. CAMEROON (*Conrault*).

Type in Berlin Museum.

The median segment is unusually long in this species.

Tiphia abrupta, Turn.

Tiphia abrupta, Turn., *Ann. and Mag. Nat. Hist.* (8), ii, p. 127, 1908, ♀.

The type is from Salisbury, Mashonaland. A specimen in the Berlin Museum from Langenburg, Lake Nyassa, has the median segment distinctly longer and the pygidium rather broader. The species of *Tiphia* are subject to local variation, the length of the median segment seeming to be especially influenced. If new species are founded on such characters before long series are available and both sexes known, much confusion may result. I therefore prefer to treat the Nyassa form merely as a local race.

There are at least five species of *Tiphia* in the collection from Langenburg, which may be distinguished by the following key to the females:—

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- A. First dorsal segment of the abdomen
with a transverse carina at the base.
- a. Head and pronotum punctured. *T. abrupta*, Turn., var.
b. Head and pronotum rugose *T. scabrosa*, Gerst.
- B. First dorsal segment without a carina
at the base.
- a. Opaque, wings subhyaline, antennae
black or fuscous *T. monomatapa*, Turn.
b. Shining, antennae orange or ferru-
ginous.
- a² Antennae orange wings fusco-
violaceous, legs black, stigma
very small *T. fulvicornis*, Turn.
b² Antennae and legs ferruginous,
wings subhyaline, stigma
large *T. pedestris*, Gerst.

Tiphia natalensis, Sm.

Tiphia natalensis, Sm., Descr. n. sp. Hymen., p. 184,
1879, ♀.

In the type specimen the second recurrent nervure is received only just beyond the middle of the second cubital cell, and the carina at the base of the first dorsal abdominal segment is very indistinct. There is a specimen from Cape Colony in the Berlin Museum which I refer with doubt to this species in which the second recurrent nervure is received much nearer to the apex of the cell, the carina of the first segment is more distinct, and the punctures are rather coarser, the insect is also much larger. But it is not advisable to found a new species in this difficult genus on a single specimen in which the differences are so slight, especially as a specimen in the British Museum from Howick, Natal, is somewhat intermediate.

Large collections of the species of *Tiphia* with full data are much needed. My impression, derived from a season's collecting in Assam, is that seasonal forms may occur as in Lepidoptera.

Tiphia simlaensis, Cam., was plentiful in April and May, but none were taken later, whereas *Tiphia himalayensis*, Cam., was taken in August and September, but not in the spring months. *T. himalayensis* is twice as large as *simlaensis*, the median segment is a little longer, the carina on

the median segment more distinct, the median one extending to the apex, the head and thorax more coarsely punctured and the stigma on the forewing a little smaller. The male of *himalayensis* (= *canaliculata*, Cam.) has the radial cell shorter than in *simlaensis*, the sculpture of the median segment much coarser, the wings darker and the clypeus without the feeble emargination on the anterior margin. But Bingham took *himalayensis* in Sikkim in April at 4000 ft. elevation. My Assam specimens were all taken at an elevation of from 5000 to 6000 ft., near Shillong.

My suggestion of seasonal dimorphism in this genus is merely tentative, and is put forward in the hope that it may lead to further observation on the subject, and to more importance being attached to accurate dates of capture by Hymenopterists.

Sub-family COSILINAE.

Anthobosca arabica, sp. nov. (Plate L, fig. 3.)

♀ Clypeus almost triangular, truncate at the apex, smooth and shining. Mandibles stout, without teeth, rather blunt at the apex. Head scarcely broader than the thorax, shining, rather sparsely punctured and thinly clothed with long cinereous hairs, the punctures closer on the front than on the vertex. Ocelli in a broad triangle, the posterior ocelli not quite as far from each other as from the eyes. Antennae short and stout, the scape shining and smooth, the second joint of the flagellum shorter than the third. Thorax and abdomen shining, sparsely punctured; median segment very minutely and rather closely punctured; pronotum much longer than the mesonotum, very slightly narrowed anteriorly, scutellum very broadly rounded at the apex; propleurae shining, very sparsely punctured, mesopleurae more closely punctured, metapleurae smooth and shining. Median segment shorter than the pronotum, gradually sloped to the apex. First abdominal segment nearly as broad at the apex as the second segment, obliquely sloped anteriorly, with a sharp carina at the base beneath, without a groove between the first and second ventral segments; apical dorsal segment punctured rugose, with close pale fulvous pubescence at the base, more finely punctured and narrowly rounded at the apex. Posterior tibiae much broadened, anterior tarsi with a comb, tarsal ungues bifid. Wings not reaching the apex of the abdomen, radial cell rounded at the apex, not reaching beyond the third cubital cell; second abscissa of the radius longer than the first, but a little shorter than the third,

the third cubital cell longer on the radial than on the cubital nervure, receiving the second recurrent nervure before one-third from the base.

Black ; a small spot below the anterior ocellus, the inner orbits of the eyes continued and uniting on the vertex, a line on the posterior margin of the head behind the summit of the eyes, the posterior margin of the pronotum and a spot at each of the anterior angles, a spot on the mesopleurae, a curved band on the scutellum, a spot at the base of the median segment and a larger one on each side at the posterior angles and a narrow transverse band on each side at the base of dorsal abdominal segments 1-4 pale yellow ; antennae and tibiae fuscous, the anterior tibiae with a yellow line above ; mandibles, tegulae, tarsi and pygidium testaceous brown. Wings hyaline, nervures testaceous. Length 9 mm.

Hab. LAHEJ, near Aden, May.

The genus has been recorded by Fox from Somaliland, but not previously from Arabia. In colour this is very unlike the Australian species of the genus, also in the bifid ungues.

Anthobosca minima, sp. nov.

♀. Mandibles falcate, acute at the apex ; clypeus a little produced, truncate at the apex. Head rounded, scarcely broader than the thorax, convex, shining, finely and sparsely punctured ; antennae inserted rather nearer to each other than to the eyes, the second joint of the flagellum as long as the third. Eyes touching the base of the mandibles, the posterior ocelli much further from the eyes than from each other. Thorax sparsely and shallowly punctured, the propleurae smooth and shining ; pronotum distinctly narrowed anteriorly, median segment no longer than the scutellum, obliquely sloped posteriorly. Abdomen finely punctured, the apical dorsal segment coarsely punctured and covered with stiff fulvous pubescence, the first segment narrowed to the base. Second abscissa of the radius more than twice as long as the first, but much shorter than the third ; the third cubital cell much longer than high, receiving the second recurrent nervure at one-third from the base. Radial cell very narrowly truncate at the apex. Posterior tibiae strongly serrate.

Black ; mandibles, antennae and legs testaceous brown ; abdomen dark reddish-brown ; clypeus, inner margin of the eyes, a spot behind the eyes near the summit, the posterior margin of the pronotum, a spot on the scutellum, a spot on the middle of the median segment, a narrow transverse band on each side of dorsal abdo-

minal segments 2-4, the tegulae and a line on the anterior tibiae pale yellow. Length 5 mm.

Hab. MOMBASSA (*Hildebrandt*).

Type in Berlin Museum,

Very near *arabica*, but differs in the more elongate radial cell, in the greater length of the third cubital cell, the smaller size and the lesser breadth of the tibiae.

Anthobosca flavopicta, sp. nov. (Plate L, fig. 4.)

♂. Clypeus sparsely punctured, much broader than long, subtruncate at the apex. Head and thorax minutely and closely punctured; the head covered sparsely with short, upright, cinereous pubescence. Antennae stout, a little shorter than the thorax and median segment combined, the third joint of the flagellum as long as the first and second combined. Scutellum subtriangular, rather narrowly truncate at the apex; the mesonotum with two shallow longitudinal furrows on each side. Median segment as long as the mesonotum, rounded, very finely rugulose. Abdomen finely shagreened, elongate, tapering to the extremities, the hypopygium small, rounded and ciliated. Posterior tibiae rather strongly serrate, all the tarsal ungues bifid. Third abscissa of the radius longer than the first and second combined; first recurrent nervure received a little beyond the middle of the second cubital cell, second a little before the middle of the third cubital cell. First transverse cubital nervure straight at the base, sharply bent before the middle.

Black; the clypeus, except a small, elongate, black spot on the centre, the inner margin of the eyes narrowly, not reaching the summit, a small spot behind the summit, a broad band on the posterior margin of the pronotum, the tegulae, a large spot on the middle of the scutellum, another on the postscutellum, the apex of the anterior femora and the anterior and intermediate tibiae and tarsi above pale yellow; tibiae and tarsi ferruginous brown. Wings hyaline, nervures black. Length 11 mm.

Hab. ZANZIBAR.

Type in the Zoological Museum at Berlin.

The posterior tibiae are more strongly serrate than in most species of the genus, but this character is not generic, there being much difference in the development of the serration in the different species. Cameron's genus *Odontothynnus* comes near this species, but differs in the bidentate clypeus and the simple ungues of the posterior tarsi. I have not seen specimens, but Cameron

was evidently not acquainted with *Anthobosca* at the time of writing his description, and I doubt if the points of distinction will prove to be of generic value.

Sub-family SCOLIINAE.

Scolia (*Diliacos*) *violacea*, Lepel.

Campsomeris violacea, Lepel., Hist. Nat. Insect. Hym., iii, p. 502, 1845, ♀.

Scolia insularis, Sm., Journ. Proc. Linn. Soc., Zool. iii, p. 153, 1858, ♂.

Liacos insularis, Turn., Ann. Mag. Nat. Hist. (8), iv, p. 168, 1909.

Saussure places *violacea*, Lepel., in *Diliacos*. It is undoubtedly the species I referred to *insularis*, Sm. My identification is certainly correct if the species so named in the British Museum by Smith is identical with the type, which I have no reason to doubt. Smith, however, does not put *insularis* in the *Liacos* group in his description.

Scolia (*Trielis*) *tchowi*, sp. nov.

♀. Clypeus raised, flattened in the middle and irregularly longitudinally striated, the anterior margin depressed and rounded, the striated area as long as broad, rounded at the base. Head shining, sparsely punctured, almost smooth round the ocelli, closely punctured between the antennae; the posterior ocelli a little further from the eyes than from each other. There is a very obscure, impressed, transverse line on the front half-way between the base of the antennae and the anterior ocellus. Thorax rather sparsely, but very deeply punctured, the scutellum very sparsely punctured, pleuræ finely punctured, the sides of the median segment shining with a few very small and shallow punctures. Median segment and fourth and fifth abdominal segments finely and closely punctured, the three basal segments of the abdomen more sparsely punctured, the second and third smooth in the middle. Sixth dorsal segment rounded at the apex, with a blunt spine on each side, longitudinally rugose-striate. Third cubital cell rather variable in shape, usually a little more than half as long on the cubital as on the radial nervure, the second transverse cubital nervure often incomplete, when complete almost interstitial with the inner margin of the radial cell; the stigma large.

Black; mandibles and flagellum beneath fusco-ferruginous;

pygidium and tarsi ferruginous brown, the spines of the tarsi whitish, one of the spines of the posterior tibiae long and spatuliform. Head and thorax sparsely clothed with grey pubescence, dense and long between the antennae and on the posterior margin of the head, the abdominal segments with an apical fascia of hairs grey on the three basal segments, bright fulvous on the fourth and fifth, the pygidium densely covered with stiff golden setae. Wings hyaline, faintly clouded with fuscous at the apex, nervures ferruginous. Length 17 mm.

Hab. S.W. AFRICA, Windhoek (*Techow*).

Type in Berlin Museum.

Very nearly allied to *Elis punctum*, Sauss., of which it may be a western form, but the clypeus is much less coarsely striated, the front between the antennae less prominent and the colour of the pubescence and colour and sculpture of the apical dorsal segment are very different. *Trielis punctum* is in the Berlin Museum collection from Lake Nyassa. The present species is in some respects intermediate between *punctum* and *stigma*; the latter species also occurs at Windhoek.

♂. The probable male of *techowi* has the clypeus yellow with a large triangular black mark in the middle, the pronotum, base of the scutellum, postscutellum, tegulae, femora, tibiae, tarsi, a broad, straight band occupying the apical two-thirds of dorsal segments 1-4, and a similar band narrowed on the sides of the fifth and sixth segments yellow; the apical half of the seventh dorsal segment ferruginous. The yellow abdominal bands are continued rather more narrowly on ventral segments 2-6, those on segments 2-3 narrowly emarginate anteriorly on each side. Wings hyaline, nervures pale ferruginous. Radial cell truncate at the apex, the third cubital cell complete, more than twice as long on the radial as on the cubital nervure. First abdominal segment nearly as broad at the apex as long. Length 16 mm.

Scolia (Trielis) stigma, Sauss.

The probable male of this species differs from that of *techowi* in the rather slender form of the first dorsal abdominal segment and in the shape of the yellow bands on dorsal segments 2-4, which are more or less deeply emarginate in the middle anteriorly and contain a transverse black spot on each side. The flagellum is often more or less ferruginous. Length 14 mm.

Scolia (Dielis) quinquefasciata, Fabr.

Scolia quinquefasciata, Fabr., Spec. Insect., i, p. 453, 1781, ♂.

Scolia signata, Sm., Cat. Hym. B.M., iii, p. 105, 1855, ♀.

Hab. WEST AFRICA.

Scolia mansucta, Gerst., Monatsber. Akad. Wiss. Berlin, p. 512, 1857.

Hab. MOZAMBIQUE.

These seem to me to be merely geographical races of the same species. *Dielis solcata*, Gerst., which is common in Mashonaland and the adjacent districts on the Zambesi, is undoubtedly a race of *quinquefasciata*, differing only in colour.

Scolia (Dielis) socotrana Kirby. (Plate L, fig. 7.)

Dielis socotrana, Kirby, Bull. Liverp. Mus., iii, p. 14, 1900.

♀. Clypeus rounded at the apex, slightly convex, smooth and shining in the middle, with a short longitudinal sulcus at the apex. Front closely punctured above the antennae, vertex smooth and shining. Thorax coarsely punctured, the disc of the mesonotum sparsely, the scutellum, postscutellum and base of the median segment at the sides shining and almost smooth. Pleurae sparsely punctured; abdomen with a few scattered piliferous punctures, a row of similar punctures before the apex of dorsal segments 1-4. Apex of the radial cell broadly truncate, very slightly oblique.

Black; the mandibles fusco-ferruginous, spines of the tibiae whitish. Wings hyaline, tinged with yellow, clouded with pale fuscous beyond the radial cell; nervures testaceous. Dense white pubescence on the sides of the clypeus, on the sides of the first abdominal segment, a band of the same on the apical margin of the second and third dorsal and ventral segments and of the fourth ventral segment; dull sparse fulvous brown pubescence on the front, thorax and median segment; dense bright golden fulvous pubescence on the posterior margin of the head and pronotum, and golden pubescence on the apical margin of the fourth dorsal segment and on the two apical segments. Tarsal ungues ferruginous. Length 16 mm.

Hab. SOMALILAND, Salakle (*von Erlanger*). Berlin Museum.

Scolia (Dielis) marshalli, sp. nov.

♀. Clypeus coarsely and sparsely punctured, the centre shining and almost smooth. Front very coarsely and closely punctured

densely clothed with erect, long, black hairs; the space round the ocelli very sparsely punctured, vertex smooth and shining, an arched depressed line above the posterior ocelli, the margins of the head fringed with long black hairs; scape very closely punctured. Thorax deeply punctured, the scutellum, postscutellum and median segment very sparsely, the disc of the mesonotum and posterior margin of the pronotum smooth, the sides of the pronotum covered with long erect black pubescence, the posterior truncation of the median segment smooth. Abdomen with a few scattered piligerous punctures, the segments above and below fringed at the apex with long black hairs, a transverse row of punctures some way before the apex of each segment. Pygidium densely covered with black setae. Tibiae and tarsi spinose and hairy.

Black; the apex of the pygidium fusco-ferruginous. Wings fuscous, fusco-hyaline near the apex, the whole glossed with greenish blue. In some lights there are faint iridescent reflections on the abdomen. Length 26 mm.

Hab. GAZA LAND, Chirinda Forest (*Odendaal*). Ex coll. *Marshall*. March.

This is a very distinct species, having the wings more obscure at the apex and hind margin than in *Discolia fasciatipennis*, Sm. (*alaris*, Sauss.), the pubescence is also longer and denser than in that species. It may possibly prove to be the female of *Dielis brachicera*, Grib., and seems to be more nearly allied to *dimidiatipennis*, Sauss., than to any other species.

Scolia (Dielis) erinita, Sauss.

Elis erinita, Sauss., Mem. soc. phys. et hist. nat. Genève, xiv, p. 65, 1854, ♂.

? *Campsomeris princeps*, Kirby, Trans. Ent. Soc. London, p. 451, 1889, ♀.

I consider that there can be little doubt that these forms are sexes of one species.

Scolia (Dielis) radula, Fabr.

Tiphia radula, Fabr., Syst. ent., p. 354, 1775, ♀.

Dielis formosa, var. *maculiceps*, Cam., Tijdsch. v. Ent., xlix, p. 218, 1906, ♀.

Cameron's identification of his insect as a variety of *formosa*, Guér., is quite mistaken; there can be no doubt that his description refers to *radula*. The male described

on the same page as *septemcincta*, Fabr., does not appear to be that species, but the description is not clear.

The species of *Dielis* described by Mantero (Ann. Mus. Civ. Storia Nat. Genova, xl, p. 592, 1900), and Schulz (Berlin Ent. Zeitsch., xlix, p. 212, 1904), as *D. formosa*, Guér., from New Guinea seems also to be wrongly identified, for in true *formosa* the second recurrent nervure is always complete. The shortening of that nervure is however characteristic of *D. subopaca*, Turn., which is very closely allied to *Discolia culta*, Sm., from New Guinea.

Scolia (Dielis) subopaca, Turn.

Campsomeris (Dielis) subopaca, Turn., Ann. Mag. Nat. Hist., (8), iv, p. 175, 1904, ♂ ♀.

This is probably the Australian subspecies of *Dielis aurulenta*, Sm., which has a wide range in the Malay Archipelago. *Dielis agilis*, Sm., from Celebes seems to me to be the male of *aurulenta*, not of *lindenii* as Saussure suggests. The sexes of the Australian form being known, it is unlikely that the male of *aurulenta* is very different to that of *subopaca*. In *aurulenta* the second recurrent nervure, though present, is often indistinct, in *agilis* it is well marked; in *subopaca* it is incomplete in both sexes, and in *Scolia culta*, Sm., from New Guinea wholly absent in the only specimen I have seen.

Scolia (Dielis) humboldti, Cam.

Dielis humboldti, Cam., Nova Guinea, v, 1, p. 53, 1903, ♀.

Hab. BISMARCK ARCHIPELAGO, Ralum.

Females from Ralum agree well with Cameron's description. There are two male species of *Dielis* in the Berlin Museum from Ralum, one of which agrees with the remarks of Cameron on a male *Dielis*, sp. 4, *l. c.* p. 53, which is almost certainly the male of *humboldti*; the other, which is probably the male of *ferrugineipes*, Mant., has the clypeus wholly yellow, also the pronotum, base of the scutellum, a transverse line on the postscutellum, the four basal abdominal segments at the apex and the outer side of the tibiae. The pubescence on the median segment is grey in *humboldti* ♂, pale fulvous on the other male, and in the latter the first abdominal segment is distinctly narrower in proportion to the length. But this male can only be assigned to *ferrugineipes* with doubt,

Scolia (Dielis) ferrugineipes, Mant.

Elis (Dielis) annulata; Fabr., var. *ferrugineipes*, Mant.,
Ann. Mus. Civ. Storia Nat. Genova, xl, p. 591,
1900, ♀.

I see no sufficient reason for regarding this as a variety of *annulata*, seeing that two or three very similar species occur in New Guinea. There is a specimen in the Berlin Museum from Ralum, in the Bismarck Archipelago.

Family SAPYGIDAE.

Parasapyga, gen. nov.

♀. Differs from *Sapyga* in the antennae, which are rather slender, thicker at the base than towards the apex; the much more robust build, the vertical truncation of the median segment and the almost conical abdomen. The second cubital cell is longer on the radial nervure than high, as in *Polochrum*, and the third cubital cell is not much narrowed on the radial nervure, but the second recurrent nervure is received at about one quarter from the base of the third cubital cell, somewhat further from the base than in *Sapyga* and not interstitial with the second transverse cubital nervure as in *Polochrum*.

Parasapyga mölleri, sp. nov. (Plate L, fig. 8.)

♀. Clypeus broadened from the base to the apex, the apical margin feebly sinuate on each side, coarsely reticulate, with a low carina from the base not reaching the apex. Maxillary palpi small, six-jointed, the basal joint the longest. Head scarcely broader than the pronotum, coarsely punctured; the posterior ocelli further from the eyes than from each other, the eyes deeply emarginate, not quite reaching the base of the mandibles; the interantennal prominence broadly rounded at the apex, the sides raised and forming low carinae close to the base of the antennae. Mandibles strongly bidentate at the apex. Antennae inserted much further from each other than from the eyes, gradually tapering towards the apex, the scape finely punctured, the first joint of the flagellum short, the second and third about equal in length. Thorax, median segment and pleurae coarsely and closely punctured, the anterior margin of the pronotum almost straight, very broad, the median segment vertically truncate from just behind the postscutellum. Abdomen almost conical, shining, finely and rather sparsely punctured, the first segment very little

narrower than the second, concavely truncate at the base, the apical segment acute. Legs without spines, except at the apex of the tibiae, the basal joint of the tarsi as long as all the others combined. Second abscissa of the radius nearly three times as long as the first and more than half as long as the third.

Black ; the inner margins of the eyes as high as the emargination, the outer margins, the apex of the interantennal prominence, a transverse band on each side of the clypeus near the apical margin, the anterior margin of the pronotum narrowly interrupted in the middle, and a small spot on each side at the basal angles of the scutellum and postscutellum pale yellow ; abdomen ferruginous tarsi fuscoferruginous. Wings fusco-hyaline, clear hyaline at the extreme base, nervures black. Length 15 mm., length of costa 10 mm.

Hab. SIKKIM, Tukvar, 4000 ft. (*Möller*).

Type in B. M.